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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/344,863	06/28/1999	EDWARD L. SCHLUETER JR.	D/99006	9542

7590

04/10/2002

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EXAMINER

HON, SOW FUN

ART UNIT

PAPER NUMBER

1772

21

DATE MAILED: 04/10/2002

RECEIVED

APR 16 2002

PATENT DEPARTMENT

Please find below and/or attached an Office communication concerning this application or proceeding.

DOCKETED-DLK

3rd OA, Finality of last OA withdrawn/  
Amend. due: 7-10-02

PTO-90C (Rev. 07-01)

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APR 18 2002

EL SEGUNDO OGC

**Office Action Summary**

09/344,863

SCHLUETER ET AL

Examiner

Art Unit

Sow-Fun Hon

1772

**-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --**

**Period for Reply**

**A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.**

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

**Status**

- 1) ☒ Responsive to communication(s) filed on 16 January 2002.
- 2a) ☐ This action is FINAL. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

**Disposition of Claims**

- 4) ☒ Claim(s) 1,4-15,17-19 and 21-26 is/are pending in the application.

4a) Of the above claim(s) 26 is/are withdrawn from consideration.

- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.

- 6) ☒ Claim(s) 1,4-15,17-19 and 21-25 is/are rejected.

- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.

- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

**Application Papers**

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- 11) ☐ The proposed drawing correction filed on \_\_\_\_\_ is: a) ☐ approved b) ☐ disapproved by the Examiner.  
If approved, corrected drawings are required in reply to this Office action.
- 12) ☐ The oath or declaration is objected to by the Examiner.

**Priority under 35 U.S.C. §§ 119 and 120**

- 13) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a) ☐ All b) ☐ Some \* c) ☐ None of:

1. ☐ Certified copies of the priority documents have been received.

2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.

3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

- 14) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application).

a) ☐ The translation of the foreign language provisional application has been received.

- 15) ☒ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121.

**Attachment(s)**

- 1) ☒ Notice of References Cited (PTO-892)

- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)

- 3) ☐ Information Disclosure Statement(s) (PTO-1449) Paper No(s) \_\_\_\_\_.

- 4) ☐ Interview Summary (PTO-413) Paper No(s). \_\_\_\_\_.

- 5) ☐ Notice of Informal Patent Application (PTO-152)

- 6) ☐ Other: \_\_\_\_\_.

Application/Control Number: 09/344,863

Page 2

Art Unit: 1772

**DETAILED ACTION*****Response to Supplemental Appeal Brief***

1. Applicant's request for reconsideration of the finality of the rejection of the last Office action is persuasive and, therefore, the finality of that action is withdrawn. New art has been found and provide new grounds of rejection listed below.
2. Applicant's statement in Paper # 20 (filed 01/16/02), that claims 21-23, which are still pending, should have been cancelled in prosecution, is acknowledged. Correction is required.

***New Rejections******Claim Rejections - 35 USC § 103***

3. The text of those sections of Title 35, U.S. Code not included in this action can be found in a prior Office action.
4. Claims 1, 9-10, 17-19, 21 are rejected under 35 U.S.C. 103(a) as being obvious over Mort et al. (US 5,834,080).

The applied reference has a common assignee with the instant application. Based upon the earlier effective U.S. filing date of the reference, it constitutes prior art only under 35 U.S.C. 102(e). This rejection under 35 U.S.C. 103(a) might be overcome by: (1) a showing under 37 CFR 1.132 that any invention disclosed but not claimed in the reference was derived from the inventor of this application and is thus not an invention "by another"; (2) a showing of a date of invention for the claimed subject matter of the application which corresponds to subject matter disclosed but not claimed in the reference, prior to the effective U.S. filing date of the reference under 37 CFR 1.131; or (3) an oath or declaration under 37 CFR 1.130 stating that the application and reference are currently owned by the same party and that the inventor named in

Application/Control Number: 09/344,863

Page 3

Art Unit: 1772

the application is the prior inventor under 35 U.S.C. 104, together with a terminal disclaimer in accordance with 37 CFR 1.321(c). For applications filed on or after November 29, 1999, this rejection might also be overcome by showing that the subject matter of the reference and the claimed invention were, at the time the invention was made, owned by the same person or subject to an obligation of assignment to the same person. See MPEP § 706.02(I)(1) and § 706.02(I)(2).

Mort et al. has a semi-insulative belt comprising a substrate coated with the charge transporting coating which can be used as an intermediate xerographic transfer belt (in intermediate transfer processes). The substrate is coated with a photosensitive photogenerator layer overcoated with the charge-transporting composition (column 9, lines 40-60). Although Mort et al. does not teach the binder for the photogenerator layer, it would have been obvious to one of ordinary skill in the art to have used the same elastomer material as for the other layers.

Mort et al. teaches that the charge transporting coating material can be a thiophene-containing polymer (column 4, lines 15-68). The belt is capable of receiving a bias (column 13, lines 60-68). A heating element (heated fuser roller) is taught (column 12, lines 20-30). Mort et al. specifically teaches a coated transfer member comprising a substrate (core) (column 9, lines 60-68) comprising insulative (dielectric) materials (column 10, lines 1-20). Mort et al teaches that an insulative butadiene-based elastomer can be nitrile rubber (acrylonitrile-butadiene block copolymer rubber) (column 17, lines 50-55).

Because Mort et al. teaches that the xerographic belt substrate comprises insulative materials, and that an insulative butadiene-based elastomer can be nitrile rubber, it would have

Application/Control Number: 09/344,863

Page 4

Art Unit: 1772

been obvious to one of ordinary skill to have used the insulative nitrile rubber as the insulative material for the xerographic belt substrate of Mort et al.

5. Claims 4, 11-13, 24 are rejected under 35 U.S.C. 103(a) as being unpatentable over Mort et al. as applied to claims 1, 9-10, 17-19, 21 above, and further in view of Mammino et al. (US 5,585,903).

Mort et al. has been discussed above and teaches a xerographic intermediate transfer belt with a charge transporting thiophene coating. In addition, Mort et al. also teaches semi-conductive/semi-insulative xerographic intermediate transfer belts (column 9, lines 40-50). Mort et al., however, fails to teach the specific claimed fluoropolymer as the substrate.

Mammino et al. teaches a xerographic intermediate transfer belt substrate with the claimed specific cured fluoropolymers (fluorocarbon elastomers) (column 5, lines 50-68). Mammino et al. discloses prior art which teach a dielectric layer such as fluoropolymer elastomers upon the conductive layer (column 2, lines 60-68).

Mammino et al. teaches that the fluoropolymer elastomer possesses the requisite strength, electrical semiconductivity and conformability to an image receiving substrate, to act as the substrate for a xerographic intermediate transfer belt (column 4, lines 10-20).

Because Mammino et al. teaches that the fluoropolymer elastomer possesses the requisite strength, electrical semiconductivity and conformability as the substrate for a xerographic intermediate transfer belt, it would have been obvious to one of ordinary skill in the art to have used the fluoropolymer elastomers of Mammino et al. as the substrate in the invention of Mort et al. in order to obtain a semi-conductive/semi-insulative xerographic belt with the desired combination of strength, electrical semiconductivity and conformability.

Application/Control Number: 09/344,863

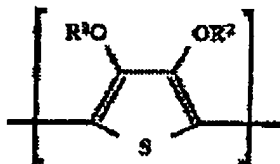
Page 5

Art Unit: 1772

6. Claims 5-8, 14-15 are rejected under 35 U.S.C. 103(a) as being unpatentable over Mort et al. as applied to claims 1, 9, 17-19, 21 above, and further in view of Jonas et al. (US 5,766,515).

Mort et al. has been discussed above and teaches a polythiophene charge transport layer in a xerographic intermediate transfer belt. Mort et al., however, fails to teach the claimed specific species of polythiophene.

Jonas et al. discloses conductive coatings which are used in xerography (electrophotography) (column 3, lines 5-15). The coatings comprise of polythiophenes of the formula shown below



wherein the R<sub>1</sub> and R<sub>2</sub> can together form an optionally substituted C<sub>1-4</sub> alkylene radical (cycloalkylene radical), preferably a methylene radical optionally substituted by alkyl groups, an ethylene-1,2 radical optionally substituted by C<sub>1-12</sub> alkyl or phenyl groups, or a cyclohexylene 1,2 radical (abstract). Jonas et al. give a preferred thiophene species as 3,4-polyethylene dioxythiophene (column 5, line 2-3). Polystyrene sulphonic acid is taught to be a component of it. The examiner has taken the position that the 3,4-polyethylene dioxythiophene has adhesive properties.

Because Jonas et al. teach that these coatings give good conductivities for use in xerography, it would have been obvious to one of ordinary skill in the art to have used the preferred 3,4-polyethylene dioxythiophene as the thiophene material in the invention of Mort et

Application/Control Number: 09/344,863  
Art Unit: 1772

Page 6

al. in order to obtain a xerographic intermediate transfer belt with the desired conductivity in its conductive layer.

*Response to Arguments*


7. Applicant's arguments with respect to claims 1, 4-15, 17-19, 21, 24 have been considered but are moot in view of the new ground(s) of rejection.
8. Prosecution with respect to claims 22-23 has not been advanced due to Applicant's statement that said claims should have been cancelled.

Any inquiry concerning this communication should be directed to Sow-Fun Hon whose telephone number is (703)308-3265. The examiner can normally be reached Monday to Friday from 9:00 AM to 6:00 PM.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Harold Pyon, can be reached on (703)308-4251. The fax phone number for the organization where this application or proceeding is assigned is (703)872-9310.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is (703)308-0661.

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04/04/02

  
HAROLD PYON  
SUPERVISORY PATENT EXAMINER  
1772 4/5/02